C61.30:M66

Minnesota Exports

STATE EXPORT SERIES

U.S. DEPARTMENT OF COMMERCE
International Trade Administration
Washington, D.C. 20230
August 1984

An ITA
Publication

EXPORTS...

. . . their importance to the United States economy

Exports play an important role in our economy and in the increasingly interdependent world economy. The United States is the world's largest exporter— currently selling $200 billion of U.S. goods abroad— and is the world's largest economy. With 5 percent of the world's population, our country produces 24 percent of the world's industrial goods.

Exporting provides a broader marketing base for U.S. firms and is considerably more important than many Americans realize. Exports currently account for 5 million jobs in the United States. On average, 25,000 jobs are generated per $1 billion of U.S. merchandise exports.

Many jobs depend on exports

Employment generated by exports is much greater than the number actually employed in producing the final products shipped abroad. Exports create a large demand for employment that spreads throughout our economy. This includes all the jobs needed to produce goods and services supplied to export producers, the jobs needed by the export producers to produce exports, and the jobs needed to move products to our ports or borders for transport to other countries.

Most of the export-related jobs are in manufacturing and services. According to the latest estimates, 49 percent of the jobs are in manufacturing, 37 percent in services, and 14 percent in production of nonmanufactured goods. The importance of export employment varies among the industries. About one out of every eight Americans currently employed in manufacturing is dependent on exports of manufactured goods. About one out of every six jobs producing nonmanufactured goods and one out of 24 jobs in services are export-related.

Exports affect production and employment in all industries, not just in a few major export industries. For example, while the primary metals industries directly export about $6 billion of their products annually, an additional $21 billion of steel and other metals are exported in the form of American-made computers, aircraft, tractors, and other manufactured goods.

Exports are of great importance to America's farmers as well. They account for $1 of every $4 of farm sales. Likewise, many jobs in the coal mining and mineral industries, as well as a considerable number in the fishing industry, are dependent on overseas sales. Exports also support employment in the trucking, rail transport, insurance, and other service industries.

Exports essential

But the basic importance of exports is that they are the principal means by which America pays for its purchases from foreign countries. The United States imports proportionately far less than other major countries, but imports have become increasingly important to the American standard of living— and they have to be paid for. The other major industrial nations generally cover the cost of the goods they import by their exports. Merchandise exports and imports each account for an average of about 20 percent of the gross national product in that group of countries. American exports, however, were only 5.9 percent of GNP in 1983, while the ratio of imports to GNP stood at 7.8 percent. This gap between exports and imports is the trade deficit, which amounted to $57.6 billion in 1983.

The strength of our exports means a great deal to America. Exports are important to all the 50 states, and each state plays a significant role in meeting the need to export more. This report helps explain that role and shows the significance of exports in relation to employment and production.

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Minnesota Export Highlights

Minnesota's exports of manufactured goods totaled $2.7 billion in 1981, 70 percent above the 1977 value. They rose much faster than production.

An estimated 26,300 jobs in Minnesota were directly related to producing manufactured exports in 1981. About 20,100 additional jobs were required to produce materials and parts for incorporation in products exported from the 50 states. Thus, 46,400 jobs in Minnesota were dependent on exports of manufactured goods—about one of every eight manufacturing jobs in the state.

Minnesota was the fifth largest U.S. exporter of agricultural products, with exports valued at $1.9 billion in FY 1982, more than double the FY 1977 value. About $1 of every $3 in Minnesota's farm sales came from exports.

Manufactured exports rose

Minnesota's exports of manufactured goods totaled $2.7 billion in 1981, up 70 percent from the 1977 value. The state ranked 20th nationally in sales of these products to foreign countries. Its exports accounted for 2 percent of the U.S. total. Exports from Minnesota firms rose much faster than the 54 percent increase in the state's total growth in manufacturing output during 1977 to 1981.

Nonelectric machinery, manufactured food, instruments, fabricated metal products, and electric and electronic equipment were Minnesota's major exports, representing more than four-fifths of the 1981 total. In addition, overseas sales of the chemicals, stone/clay/glass, paper, and rubber/plastic industries ranged from $42 million to $82 million.

Nonelectric machinery was the leading manufactured export from the state. Valued at $1.4 billion, these foreign sales accounted for 20.7 percent of the industry's production and placed Minnesota as the 10th largest exporter of these goods in the nation. About one-sixth of the work force in this industry, the state's largest employer for the production of manufactures, was directly related to exports. Exports generated about 13,200 jobs.

Exports of manufactured food, which included meat and grain mill products, tripled from 1977 to 1981 to $286 million. The state ranked 14th in the nation as an exporter of this industry's products. An estimated 900 jobs were directly related to overseas shipments.

The value of instruments exports was $277 million in 1981, almost one and a half times the 1977 level. Growing nearly as fast as output, these increased exports were 17 percent of this industry's expansion. Exports generated 3,800 jobs, or one-sixth of this industry's total employment in the state.

Fabricated metals exports rose a sharp one and two-third times the 1977 level to a 1981 value of $178 million. Expanding more than twice as fast as production, these additional overseas sales were one-eighth of this industry's growth. About 2,800 jobs were related to these exports, one-twelfth of the industry work force.

Exports of electric and electronic equipment were $174 million in 1981. Growing about the same rate as production, exports contributed about 9 percent of this industry's output. The 2,600 jobs related directly to exports were nearly one-tenth of the total labor force in this industry.

The Census Bureau has estimated that the full impact of U.S. exports on Minnesota's manufacturing activity was 11.6 percent rather than the 7.7 percent attributable to direct exports as shown in table 3. Estimates including supporting shipments of materials and parts of incorporation in products exported from 50 states are shown in tables 6 to 8. Thus, of the expanded manufacturing output gen-

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Explanatory Notes

State export statistics presented in this report are estimates, in contrast to national export statistics, which are compiled from export documents prepared at the time goods leave the country. This note considers the reasons for, and consequences of, that difference.

Export estimates for each state are needed in order to measure the relative impact throughout our nation of changes in goods sold abroad. National export data are compiled each month in detail by types of goods sold and summarized in large commodity aggregates and overall totals—but in order to measure exports by each state of origin, which is not identified in shippers' export documents, special studies are necessary.

This report—one in a series of reports for each state—brings together state export estimates from studies by various U.S. Government agencies on manufactured goods, agricultural products, fishery products, and selected minerals. Overall totals for all goods exported from each state are not shown since these studies differ in methodology, frequency, export valuation, and U.S. geographic coverage, and the manufactures and agricultural studies somewhat overlap the products covered.

Manufactured Exports in this report relate to manufactures as defined in the Standard Industrial Classification (SIC) and include manufactured food, mineral fuel products, fats, oils, firearms, and ammunition not typically part of the Standard International Trade Classification (SITC) definition of manufactures. For the United States as a whole, exports of these additional products totaled $28.5 billion in 1981. Exports, normally valued at the port of exportation, are adjusted to f.o.b. plant values to make accurate comparisons with production (shipments) data.

The state estimates for manufactured goods are based on surveys of manufacturers conducted by the Industry Division of the Bureau of the Census. These studies are for selected years; cover the continental United States, Alaska, and Hawaii; and present data classified by the 20 major SIC industry groups (2-digit). Tables 1 to 3 show the value of state exports and state production, and the number of workers employed in manufacturing plants producing the finished goods for direct shipment to foreign destinations.

State economies also benefit from manufactured goods produced for ultimate export through other states, and from jobs related to manufactured exports which are generated in nonmanufacturing industries. In the table below, percentages show the full impact of export-related manufactures on state employment. Tables 6 to 8 show the percent of production and the value of state export-related manufactures—direct exports plus indirect exports or the value of materials and parts incorporated in products exported from elsewhere in the nation—and the number of state export-related workers employed in manufacturing plants producing these goods. Table 8 also shows the total number of workers related to manufactured exports—in manufacturing plus the number in nonmanufacturing industries supporting manufactured exports by supplying materials or services such as forwarding, warehousing, transport, and other foreign trade-related services.

Agricultural Exports relate to food products other than those from marine sources, unmanufactured tobacco, and other agricultural products simply processed such as fibers, raw hides and skins, fats and oils, wine and beverages other than distilled types.

The state estimates for agricultural exports are from studies prepared by the U.S. Department of Agriculture. Exports reflect shares in national exports according to each state's production and sales data. Export values were obtained by multiplying each state's share of farm production by commodity times the total export value for each of the respective commodities. These annual studies are for fiscal years ending September 30 and for all states except Alaska, and show data classified by 18 commodity groups. Tables 4 and 5 show the value of state exports and the percent of farm sales.

Other Exports—Fishery products, various minerals, and fuel export estimates shown in the Highlights on page 1 for selected states are from studies prepared by the National Oceanic and Atmospheric Administration (NOAA), the U.S. Department of Interior, and the U.S. Department of Energy, respectively. Exports generally reflect shares in national exports according to state production.

Annual Exports and Employment Related to Manufactured Exports

	Manufactured exports	Manufacturing employment		Total employment, including nonmanufacturing employment	
	(million dollars)	(thousands)	Percent of manufacturing employment	(thousands)	Percent of civilian employment
Minnesota *					
1976	1,567	37.8	11.8	66.8	3.8
1977	1,605	34.6	10.4	62.8	3.5
1980	2,575	48.1	12.5	92.2	4.4
1981	2,730	46.4	12.4	90.9	4.5
United States					
1976	83,098	2,125.4	11.3	3,452.1	4.0
1977	85,796	1,990.2	10.2	3,258.2	3.6
1980	151,216	2,639.3	12.8	4,808.3	4.8
1981	164,283	2,603.8	12.8	4,794.0	4.7

* Minnesota's export-related manufactures were as follows in million dollars: 1976, 2,244; 1977, 2,298; 1980, 3,909; and 1981, 4,135. About 15 percent of the increase in Minnesota's manufacturing production from 1977 to 1981 was generated by growth in export-related manufactures.

TABLE 1

Minnesota Manufactured Exports, Production, and Employment, 1981

- Minnesota's leading manufactured exports were nonelectric machinery, food products, and instruments.
- These three industries accounted for 74 percent of Minnesota's total exports of manufactures.

Industry group	Production (million dollars)	Estimated exports (million dollars)	Exports as percent of production	Estimated employment related to exports (thousands)	Employment related to exports as percent of total employment
Total	35,504	**2,730**	7.7	26.3	7.1
Machinery, except electric	6,992	**1,444**	20.7	13.2	17.1
Food and kindred products	9,166	**286**	3.1	0.9	2.3
Instruments and related products	1,588	**277**	17.5	3.8	17.0
Fabricated metal products	2,466	**178**	7.2	2.8	8.3
Electric and electronic equipment	1,857	**174**	9.4	2.6	9.5
Chemicals and allied products	1,239	**82**	6.6	0.4	4.9
Stone, clay, and glass products	1,265	**74**	5.9	0.4	3.5
Paper and allied products	1,578	**60**	3.8	0.2	1.4
Rubber and plastic products	863	**42**	4.9	0.4	3.2
Leather and leather products	185	**24**	13.0	0.2	9.1
Printing and publishing	1,816	**22**	1.2	0.2	0.6
Transportation equipment	958	**20**	2.1	0.2	3.4
Misc. manufacturing industries	365	**14**	3.7	0.2	3.2
Textile mill products	134	**9**	6.6	(1)	--
Primary metal industries	516	**8**	1.5	(1)	--
Lumber and wood products	844	**7**	0.8	(1)	--
Furniture and fixtures	251	**4**	1.6	(1)	--
Apparel and textile products	257	**3**	1.2	(1)	--
Petroleum and coal products	3,165	**1**	(2)	(1)	--

[1] Less than 50 employees. [2] Less than one half of one percent. -- Not applicable.

TABLE 2

Minnesota Growth in Manufactured Exports

- In 1981, Minnesota's manufactured exports totaled $2.7 billion, over one and a half times the 1977 value.
- Nearly three-fourths the increase stemmed from growth in nonelectric machinery, and instruments exports.

Industry group	Export value (million dollars)					Percent increase from 1977 to 1981		Export increase as percent of production increase 1977-81
	1960	1969	1972	1977	1981	Exports	Production	
Total	172	492	654	1,605	**2,730**	70	54	9
Machinery, except electric	47	243	351	754	**1,444**	92	94	20
Food and kindred products	36	66	73	316	**286**	-10	35	0
Instruments and related products	(1)	28	(1)	113	**277**	145	148	17
Fabricated metal products	5	6	9	67	**178**	167	58	12
Electric and electronic equipment	45	20	24	141	**174**	23	24	9
Chemicals and allied products	7	10-25	(1)	21	**82**	297	58	14
Stone, clay, and glass products	(1)	1-5	(1)	2	**74**	2,860	48	17
Paper and allied products	9	9	(1)	18	**60**	222	43	9
Rubber and plastic products	(1)	1-5	(1)	5	**42**	708	80	10
Leather and leather products	(1)	0-1	(1)	(1)	**24**	--	--	--
Printing and publishing	1	1-5	(1)	8	**22**	162	58	2
Transportation equipment	(1)	52-57	94	85	**20**	-77	-6	--
Misc. manufacturing industries	17	26	(1)	10	**14**	33	31	4
Textile mill products	1	1-5	(1)	16	**9**	-45	44	0
Primary metal industries	(1)	1-5	(1)	6	**8**	34	14	3
Lumber and wood products	2	1-5	(1)	26	**7**	-74	(2)	0
Furniture and fixtures	(1)	0-1	(1)	1	**4**	583	61	4
Apparel and textile products	2	1-5	(1)	2	**3**	82	39	2
Petroleum and coal products	(1)	0-1	(1)	1	**1**	27	127	(2)

[1] Not available. [2] Less than one half of one percent. -- Not applicable.
Note: Totals include values for industry groups which are not shown separately.

TABLE 3

United States Manufactured Exports by State

- California, Texas, Illinois, Ohio, and Michigan continued to be the top five exporters of manufactures in 1981.
- Manufactured exports totaled $2 billion or more for almost half of the 50 states.

State	Rank as exporter in 1981	Export value (million dollars)				Percent increase from 1977 to 1981	Estimated exports as percent of state production	Employment related to exports as percent of state employment
		1969	1972	1977	1981			
U.S., total	--	**29,210**	**36,608**	**85,796**	**164,283**	**91**	**8.1**	**7.3**
California	1	2,721	2,809	9,116	18,775	106	9.8	9.7
Texas	2	1,468	1,982	5,386	11,687	117	6.5	7.2
Illinois	3	2,343	2,902	6,313	10,369	64	8.2	6.9
Ohio	4	2,338	3,054	6,028	10,353	72	8.5	7.9
Michigan	5	2,613	3,522	6,937	10,275	48	9.8	7.6
New York	6	2,296	2,795	5,833	10,155	74	8.5	6.5
Washington	7	954	1,781	2,805	9,023	222	24.5	21.9
Pennsylvania	8	1,902	2,351	4,714	8,129	72	7.1	6.9
Massachusetts	9	818	920	2,310	5,096	121	10.6	8.6
Indiana	10	998	1,404	2,942	5,008	70	7.1	7.0
North Carolina	11	739	705	2,291	4,682	104	7.5	5.0
New Jersey	12	1,114	1,328	2,881	4,469	55	6.1	5.8
Wisconsin	13	785	916	2,132	4,031	89	7.4	7.4
Louisiana	14	396	541	1,494	3,725	149	6.4	6.6
Florida	15	426	567	1,583	3,352	112	9.1	6.6
Virginia	16	581	716	1,573	3,344	113	9.3	6.7
Tennessee	17	472	679	1,501	3,285	119	8.0	5.6
Connecticut	18	659	848	1,662	3,083	85	10.2	8.2
Missouri	19	634	577	1,682	3,013	79	7.3	6.2
Minnesota	**20**	**492**	**654**	**1,605**	**2,730**	**70**	**7.7**	**7.1**
Iowa	21	412	590	1,578	2,705	71	8.1	8.2
Georgia	22	428	580	1,419	2,505	76	5.3	4.8
South Carolina	23	254	312	1,150	2,230	94	8.0	5.5
Alabama	24	318	287	895	1,936	116	6.3	5.5
Kentucky	25	345	451	1,354	1,935	43	6.4	5.1
Oregon	26	240	237	906	1,724	90	9.2	9.0
Arizona	27	157	266	680	1,639	141	13.1	15.4
Arkansas	28	204	320	626	1,604	156	8.7	6.1
Kansas	29	241	283	689	1,517	120	5.7	7.6
Oklahoma	30	158	252	639	1,515	137	6.0	7.3
Colorado	31	157	245	668	1,283	92	7.5	8.6
Maryland	32	362	314	634	1,219	92	5.7	5.3
West Virginia	33	235	295	438	1,199	174	10.0	6.1
Mississippi	34	181	236	718	1,159	61	5.9	4.6
Nebraska	35	100	134	328	945	188	6.1	6.3
Alaska	36	33-48	(1)	374	653	75	33.4	32.5
New Hampshire	37	74	103	290	637	120	8.8	8.9
Rhode Island	38	110	107	297	586	98	7.7	6.8
Maine	39	77	83	232	498	114	5.5	5.6
Idaho	40	35	27	246	460	87	9.2	6.8
Utah	41	48	127	173	449	159	4.6	5.8
Delaware	42	124	128	155	375	142	4.1	3.7
Vermont	43	52	52	183	229	25	6.3	6.0
South Dakota	44	13	(1)	95	185	96	6.3	4.5
North Dakota	45	7	14	73	156	114	6.6	7.9
Nevada	46	10-25	7	31	105	238	6.8	5.1
Hawaii	47	10-25	(1)	26	96	265	2.7	2.3
New Mexico	48	16	18	37	64	73	2.0	0.9
Montana	49	14	(1)	59	61	4	1.4	1.8
Wyoming	50	1-5	(1)	6	18	192	0.6	--

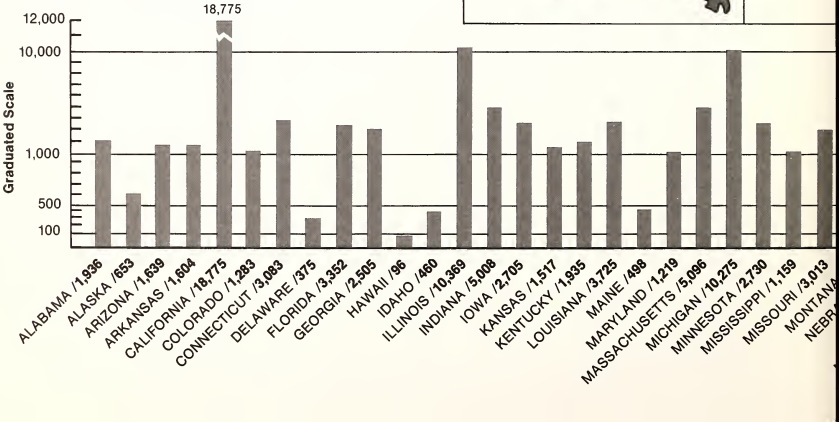
[1] U.S. total includes values withheld to avoid disclosure for individual companies or because estimate did not meet publication standards. -- Not applicable.

U.S. Manufactured Exports by State

- All 50 states shared in U.S. exports of manufactures.
- Exports accounted for varying percentages of domestic production

Estimated Value of Exports of Manufactures, 1981

(in millions of dollars)



Estimated Exports as Percent
of Production, 1981
(Indicated by shading)
0.6% to 4.9%
5.0% to 6.4%
6.5% to 9.9%
10% or more

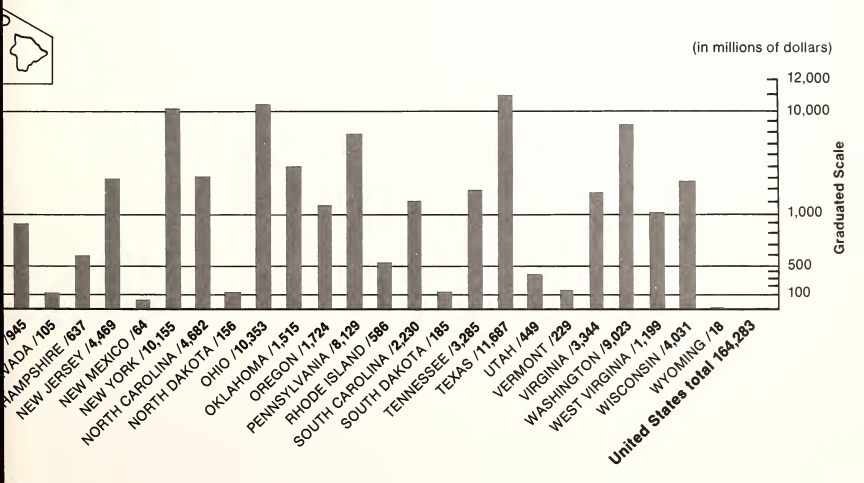

(in millions of dollars)
12,000
10,000
1,000
500
100
Graduated Scale
/945
VADA /105
HAMPSHIRE /637
NEW JERSEY /4,469
NEW MEXICO /64
NEW YORK /10,155
NORTH CAROLINA /4,682
NORTH DAKOTA /156
OHIO /10,353
OKLAHOMA /1,515
OREGON /1,724
PENNSYLVANIA /8,129
RHODE ISLAND /586
SOUTH CAROLINA /2,230
SOUTH DAKOTA /185
TENNESSEE /3,285
TEXAS /11,687
UTAH /449
VERMONT /229
VIRGINIA /3,344
WASHINGTON /9,023
WEST VIRGINIA /1,199
WISCONSIN /4,031
WYOMING /18
United States total 164,283

TABLE 4

Minnesota Manufactured Agricultural Exports*

- In fiscal 1982, Minnesota's share of U.S. agricultural exports totaled $1,883 million, more than double the 1977 value.
- Feed grains, soy beans, and wheat were the leading farm exports from the state.

Product	Estimated exports (million dollars)				Percent increase 1977 to 1982
	FY 1968	FY 1972	FY 1977	FY 1982	
Total	226	347	918	**1,883**	105
Feed grains and products	50	72	205	**595**	190
Soybeans and products	76	114	286	**587**	105
Wheat and products	32	32	182	**323**	77
Sunflower seeds and oil	(2)	(2)	(2)	**91**	--
Dairy products	20	54	36	**55**	54
Vegetables and preparations	3	3	16	**49**	215
Meats and products	7	9	30	**49**	59
Hides and skins	6	15	48	**34**	-29
Fats, oils, and greases	9	9	22	**26**	15
Poultry and products	2	3	8	**13**	59
Fruits and preparations	(1)	(1)	(1)	**1**	300
Flaxseed	3	1	(2)	**(2)**	--
Other products	20	35	84	**61**	-27

* Exports reflect shares in national exports according to each state's production.
[1] Less than $500,000. [2] Not available. -- Not applicable.

TABLE 5

United States Agricultural Exports* by State

- Exports accounted for over one fourth of total U.S. farm sales in FY 1982 and for more than 25 percent of sales from 20 of the states.
- Illinois, Iowa, California, and Texas each exported more than $2 billion of farm products.

State	Rank as exporter FY 1982	Export value (million dollars) FY 1968	FY 1972	FY 1977	FY 1982	Percent increase FY 1977 to FY 1982	Exports as percent of farm sales[1] FY 1982
U.S., total	--	[2]6,315	8,050	24,013	[2]39,094	63	27.5
Illinois	1	585	758	2,539	3,306	30	43.3
Iowa	2	392	620	2,042	3,026	48	28.9
California	3	413	592	1,774	2,854	61	20.6
Texas	4	551	456	1,761	2,569	46	25.4
Minnesota	**5**	**226**	**347**	**918**	**1,883**	**105**	**29.4**
Nebraska	6	230	283	988	1,808	83	26.4
Kansas	7	296	365	998	1,628	63	29.3
Indiana	8	252	384	1,319	1,559	18	36.6
Missouri	9	174	317	766	1,404	83	34.4
North Dakota	10	166	250	554	1,326	149	50.7
Arkansas	11	255	352	907	1,283	41	39.2
North Carolina	12	366	420	964	1,247	29	29.8
Ohio	13	194	262	957	1,052	10	31.6
Washington	14	152	163	414	946	129	33.0
Mississippi	15	164	230	648	787	21	35.8
Oklahoma	16	115	108	410	781	90	26.9
Michigan	17	92	107	318	753	137	28.2
Kentucky	18	69	132	473	731	55	24.7
Georgia	19	132	173	476	706	48	21.7
South Dakota	20	95	124	210	655	212	23.8
Louisiana	21	155	191	543	626	15	37.4
Colorado	22	63	98	239	612	156	19.6
Wisconsin	23	59	104	263	592	125	11.9
Tennessee	24	102	143	390	590	51	31.0
Florida	25	101	148	390	586	50	14.2
Montana	26	107	101	322	559	74	37.9
Idaho	27	66	91	262	551	110	24.6
Alabama	28	56	102	332	481	45	21.7
Oregon	29	49	65	182	423	132	24.1
South Carolina	30	107	135	312	407	30	35.6
Arizona	31	61	70	285	404	42	23.3
Virginia	32	80	92	225	384	71	23.5
Pennsylvania	33	65	42	137	246	79	8.3
New York	34	63	44	109	214	96	8.2
Maryland	35	35	41	136	188	39	17.9
New Mexico	36	24	28	82	121	48	13.6
Wyoming	37	8	16	38	95	154	15.8
Utah	38	14	19	55	80	45	14.7
Delaware	39	15	14	53	73	38	18.5
New Jersey	40	19	11	38	65	72	13.9
Hawaii	41	16	17	59	41	-30	8.4
Maine	42	6	5	28	28	1	6.5
Massachusetts	43	5	6	12	24	105	7.6
Nevada	44	2	4	10	22	118	10.5
West Virginia	45	6	4	11	22	97	9.5
Connecticut	46	8	12	22	15	-32	4.6
Vermont	47	2	4	3	8	138	1.9
New Hampshire	48	1	1	2	4	89	3.6
Rhode Island	49	[3]	[3]	1	1	11	3.1
Alaska	50	[4]	[4]	[5]	[4]	--	--

* Exports reflect shares in national exports according to each state's production. [1] Commercial sales plus net Commodity Credit Corporation loans and purchases under price support programs. [2] Includes exports that were not apportioned among states. [3] Less than $500,000. [4] Not available. [5] Less than $100,000. -- Not applicable.

TABLE 6

Minnesota Manufactured Production, Export-Related Manufactures and Employment, 1981

- About 1 out of 8 Minnesota jobs in manufacturing are due to exports.
- Four industries—nonelectric machinery, fabricated metals, instruments, and electric/electronic equipment—accounted for 65 percent of Minnesota's export-related jobs in manufacturing.

Industry group	Production (million dollars)	Export-related manufactures (million dollars)	Export related as percent of production	Employment for export-related manufactures (thousands)	Employment for export related as percent of total employment
Total	35,504	4,135	11.6	46.4	**12.4**
Machinery, except electric	6,992	1,730	24.7	16.8	**21.7**
Food and kindred products	9,166	474	5.1	1.7	**4.3**
Instruments and related products	1,588	323	20.3	4.5	**20.0**
Fabricated metal products	2,466	291	11.7	4.5	**13.3**
Electric and electronic equipment	1,857	275	14.8	4.2	**15.3**
Paper and allied products	1,578	176	11.1	1.3	**9.0**
Chemicals and allied products	1,239	164	13.2	0.9	**10.9**
Petroleum and coal products	3,166	157	4.9	0.1	**5.5**
Stone, clay, and glass products	1,265	131	10.3	0.9	**7.8**
Rubber and plastic products	863	98	11.3	1.2	**9.5**
Primary metal industries	516	87	16.8	1.1	**14.8**
Lumber and wood products	844	62	7.3	0.7	**6.5**
Transportation equipment	958	47	4.9	0.3	**5.0**
Printing and publishing	1,816	47	2.5	0.7	**2.1**
Leather and leather products	185	27	14.4	0.2	**9.0**
Misc. manufacturing industries	365	18	5.0	0.3	**4.8**
Textile mill products	134	13	9.8	0.1	**3.9**
Apparel and textile products	257	7	2.5	0.1	**2.0**
Furniture and fixtures	251	6	2.4	(1)	**(2)**

[1] Less than 50 employees. [2] Less than one half of one percent.

TABLE 7

Minnesota Growth in Export-Related Manufactures

- The 80 percent growth in the value of export-related manufactures from 1977 to 1981 was much faster than the rate of expansion in production.
- One-fourth of the increase in nonelectric machinery production was generated by growth in export-related manufactures.

Industry group	Export-related manufactures (million dollars)		Percent increase from 1977 to 1981		Export-related increase as percent of production increase 1977-81
	1977	1981	Export related	Production	
Total	2,298	4,135	80	54	**15**
Machinery, except electric	887	1,730	95	94	**25**
Food and kindred products	406	474	17	35	**3**
Instruments and related products	130	323	149	148	**20**
Fabricated metal products	137	291	113	58	**17**
Electric and electronic equipment	205	275	34	24	**20**
Paper and allied products	79	176	123	43	**21**
Chemicals and allied products	60	164	176	58	**23**
Petroleum and coal products	28	157	451	127	**7**
Stone, clay, and glass products	29	131	352	48	**25**
Rubber and plastic products	32	98	205	80	**17**
Primary metal industries	66	87	33	14	**33**
Lumber and wood products	63	62	-1	-([2])	**--**
Printing and publishing	20	47	134	58	**4**
Transportation equipment	106	47	-55	-6	**--**
Leather and leather products	([1])	27	--	--	**--**
Misc. manufacturing industries	14	18	33	31	**5**
Textile mill products	18	13	-26	44	**0**
Apparel and textile products	4	7	57	39	**3**
Furniture and fixtures	2	6	239	61	**5**

[1] Not available. [2] Less than one half of one percent. -- Not applicable.
Note: Totals include values for industry groups which are not shown separately.

TABLE 8

United States Export-Related Manufactures and Employment by State

- California, New York, Texas, Pennsylvania, and Ohio led the states with the largest number of jobs related to manufactured exports.
- Employment rates were highest in Connecticut, Washington, Ohio, and Delaware for jobs in all industries related to manufactured exports.

State	Rank as export related in 1981	Export-related manufactures 1977 (million dollars)	Export-related manufactures 1981 (million dollars)	Percent increase from 1977 to 1981	Percent of state production 1981	Employment for export related as percent of manufacturing employment	Total employment related to manufactured exports (thousands)	Total employment related to manufactured exports Percent of civilian employment
U.S., total	--	**142,404**	**271,703**	**91**	**13.4**	**12.8**	**4,794.0**	**4.7**
California	1	13,319	27,399	106	14.2	14.5	526.5	4.7
Texas	2	9,196	22,651	146	12.5	12.7	285.5	4.2
Ohio	3	11,047	18,132	64	14.8	14.7	284.0	6.2
Illinois	4	10,216	17,039	67	13.4	12.9	275.4	5.4
Michigan	5	10,975	15,512	41	14.7	14.6	218.9	5.7
Pennsylvania	6	8,955	15,485	73	13.4	13.2	284.1	5.5
New York	7	8,894	15,260	72	12.7	11.4	372.0	4.9
Washington	8	3,716	10,773	190	29.2	26.3	121.9	6.5
Indiana	9	5,784	9,692	68	13.7	13.3	140.3	5.8
New Jersey	10	4,880	8,204	68	11.2	11.9	175.0	5.4
North Carolina	11	3,883	7,808	101	12.5	9.8	150.3	5.5
Massachusetts	12	3,498	7,425	112	15.4	14.2	155.1	5.6
Louisiana	13	2,734	7,415	171	12.8	11.9	63.7	3.6
Wisconsin	14	3,607	6,590	83	12.0	13.0	114.9	5.3
Tennessee	15	2,716	5,567	105	13.4	10.3	102.5	5.3
Virginia	16	2,480	5,163	108	14.3	11.1	88.3	3.6
Georgia	17	2,723	4,981	83	10.5	9.7	106.1	4.3
Florida	18	2,294	4,965	116	13.4	10.8	129.9	3.0
Connecticut	19	2,687	4,886	82	16.2	14.9	103.5	7.1
Missouri	20	2,834	4,861	72	11.7	11.1	94.7	4.3
South Carolina	21	2,117	4,194	98	15.0	11.7	76.4	5.5
Minnesota	**22**	**2,298**	**4,135**	**80**	**11.6**	**12.4**	**90.9**	**4.5**
Alabama	23	2,061	4,024	95	13.1	11.0	71.1	4.6
Iowa	24	2,228	3,940	77	11.8	12.0	60.0	4.5
Kentucky	25	2,367	3,751	58	12.3	10.6	58.7	3.9
Oregon	26	1,498	2,801	87	14.8	14.5	58.7	4.7
Oklahoma	27	1,044	2,752	164	10.8	12.4	54.5	4.0
Kansas	28	1,158	2,678	131	10.1	12.4	47.2	4.3
Arkansas	29	1,086	2,524	132	13.6	10.5	40.8	4.3
Arizona	30	1,050	2,461	134	19.7	20.5	53.7	4.4
West Virginia	31	1,108	2,361	113	19.7	14.6	30.7	4.2
Maryland	32	1,327	2,348	77	11.0	10.8	53.8	2.6
Mississippi	33	1,111	2,066	86	10.4	8.2	36.9	3.7
Colorado	34	976	1,922	97	11.1	12.7	49.4	3.3
Nebraska	35	576	1,477	156	9.5	10.0	24.4	3.3
Utah	36	416	1,050	153	10.6	10.3	20.5	3.3
Rhode Island	37	540	1,018	88	13.4	12.0	24.9	5.8
New Hampshire	38	455	994	119	13.6	14.1	24.3	5.5
Maine	39	425	924	118	10.1	9.9	20.9	4.5
Delaware	40	346	852	146	9.4	13.5	15.1	6.1
Idaho	41	381	740	94	14.7	11.7	15.4	3.9
Alaska	42	393	711	81	36.3	34.1	6.3	3.3
Vermont	43	287	451	57	12.3	11.6	10.1	4.0
Montana	44	182	327	80	7.6	7.5	7.9	2.2
South Dakota	45	130	267	105	9.1	7.9	8.1	2.6
North Dakota	46	98	242	147	10.2	11.1	7.8	2.6
New Mexico	47	109	235	116	7.2	4.6	9.5	1.7
Hawaii	48	66	232	252	6.3	4.5	6.4	1.5
Nevada	49	70	205	192	13.1	10.1	5.4	1.2
Wyoming	50	43	180	320	5.6	4.4	5.1	2.1

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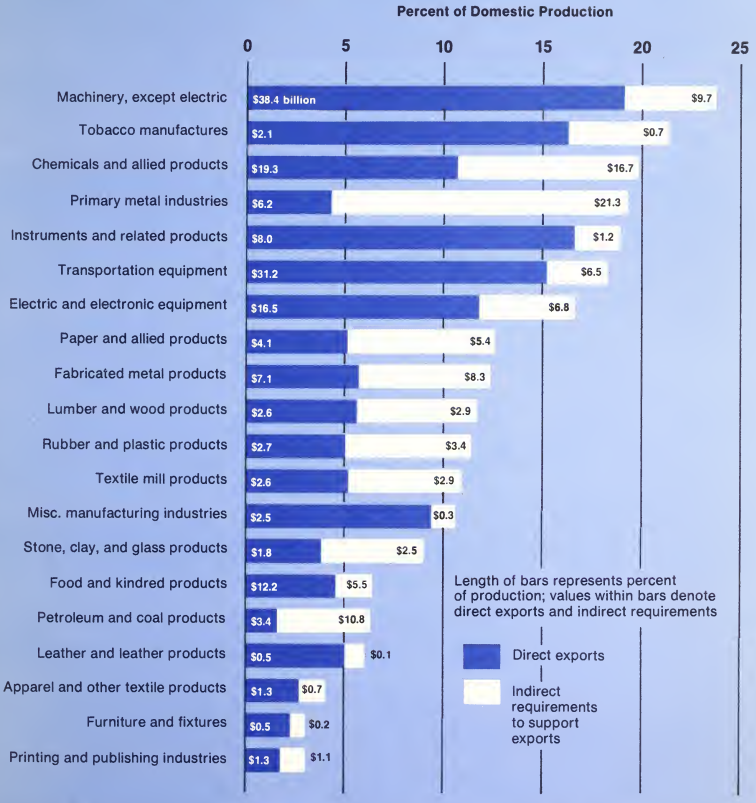
Exports of U.S. Manufacturing Industries Related to Domestic Production, 1981

Direct Exports and Indirect Requirements to Support Exports



Note: Percentages shown for each industry indicate the total relative impact of exports on the domestic economy, including direct exports and goods shipped from domestic establishments for use as inputs in manufactured products exported from other establishments. Such inputs are included in domestic production industry totals.

continued from page 1
erated between 1977 and 1981, 15 percent—or $1 out of every $7—was due to export-related shipments.

State fifth in agricultural exports

Minnesota ranked fifth in the nation in exports of agricultural products, including some manufactures of farm origin. These shipments totaled an estimated $1.9 billion in FY 1982, more than double the FY 1977 level. Feed grains, soybeans, wheat and flour comprised about four-fifths of the total value. Other significant export commodities were sunflower seeds and oils, dairy products, vegetables, and meats. Minnesota was the second leading exporter of sunflower seeds and oils after North Dakota, and the third leading exporter of dairy products.

The strong growth in agricultural exports from FY 1977 to FY 1982 accounted for 38 percent of the rise in farm sales and added substantially to the income of Minnesota farmers. In this period, the export contribution to each dollar of the state's farm sales increased from 24 to 29 cents.

Leading iron ore exporter

Minnesota exported $112 million of iron ore in 1981 up strongly from $27 million in 1977. This expansion reflects (1) larger production capacity and (2) higher prices. The state was the second leading exporter of this product in 1981, exceeded only by Michigan. The state also exported chromite valued at $2.6 million.

Export-related employment significant

Minnesota's $2.7 billion worth of manufactured exports provided direct employment for an estimated 26,300 workers in 1981. Those jobs constituted 7.1 percent of the state's direct employment in manufacturing. From 1977 to 1981 the number of workers engaged in the production of manufactures advanced while employment directly related to exports rose by 25 percent. Half of these workers were concentrated in the nonelectric machinery industry discussed above. These jobs accounted for 17 percent of the work force in that industry.

In addition, an estimated 20,100 jobs were required in the state to manufacture products used by other establishments in the United States as inputs for manufactures that were ultimately exported. Thus, an estimated 46,400 jobs in Minnesota were directly or indirectly dependent on exports of manufactured goods. This was 12.4 percent of all manufacturing employment in the state.

Two-thirds of the jobs dependent on manufactured exports were concentrated in the nonelectric machinery, fabricated metals, instruments, and electric and electronic equipment industries. These jobs accounted for one out of five jobs in the nonelectric machinery and instruments industries, and one out of seven/eight jobs in the electric/electronic equipment and fabricated metals industries.

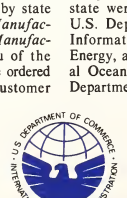
An additional 44,500 jobs were generated in nonmanufacturing industries that supply materials and services supporting manufactured exports. Minnesota's total employment related to manufactured exports amounted to 90,900 jobs.

It is estimated that Minnesota's farm employment related to exports in 1982 amounted to about 62,900 or almost one out of every three farmers. This estimate assumes that the number of farmers dependent on exports corresponds to the ratio of exports to farm sales in the state. Depending on numerous variables, including the character of the product, mechanization, and degree of intensiveness of farming, it may somewhat understate or overstate the actual number dependent on exports.

STATE EXPORT REPORTS

This report is one of a series of 50 prepared by the Office of Trade and Industry Information /Trade Information and Analysis, International Trade Administration on exports from the individual states. Data on manufactured and agricultural exports are presented in tabular form for a series of years. In addition, recent information is included on state exports of fish, fish products, and minerals. The statistics on 1981 exports of manufactures by state were taken from *Origin of Exports of Manufactured Products, 1981 Annual Survey of Manufactures,* M81 (AS)-5, issued by the Bureau of the Census in May 1983. That publication can be ordered from the Data User Services Division, Customer Services (Publications), Bureau of the Census, Washington, D.C. 20233, or from any U.S. Department of Commerce District Office for $2.75 per copy. Data for earlier years were taken from similar Census reports now out of print.

The information on state shares of agricultural exports was taken from various issues of *Foreign Agricultural Trade of the United States* published by the U.S. Department of Agriculture. Special compilations on exports of minerals and fuels by state were provided by the Bureau of the Mines, U.S. Department of Interior, and by the Energy Information Administration, U.S. Department of Energy, and on fish and fishery products by National Oceanic and Atmospheric Administration, U.S. Department of Commerce.



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